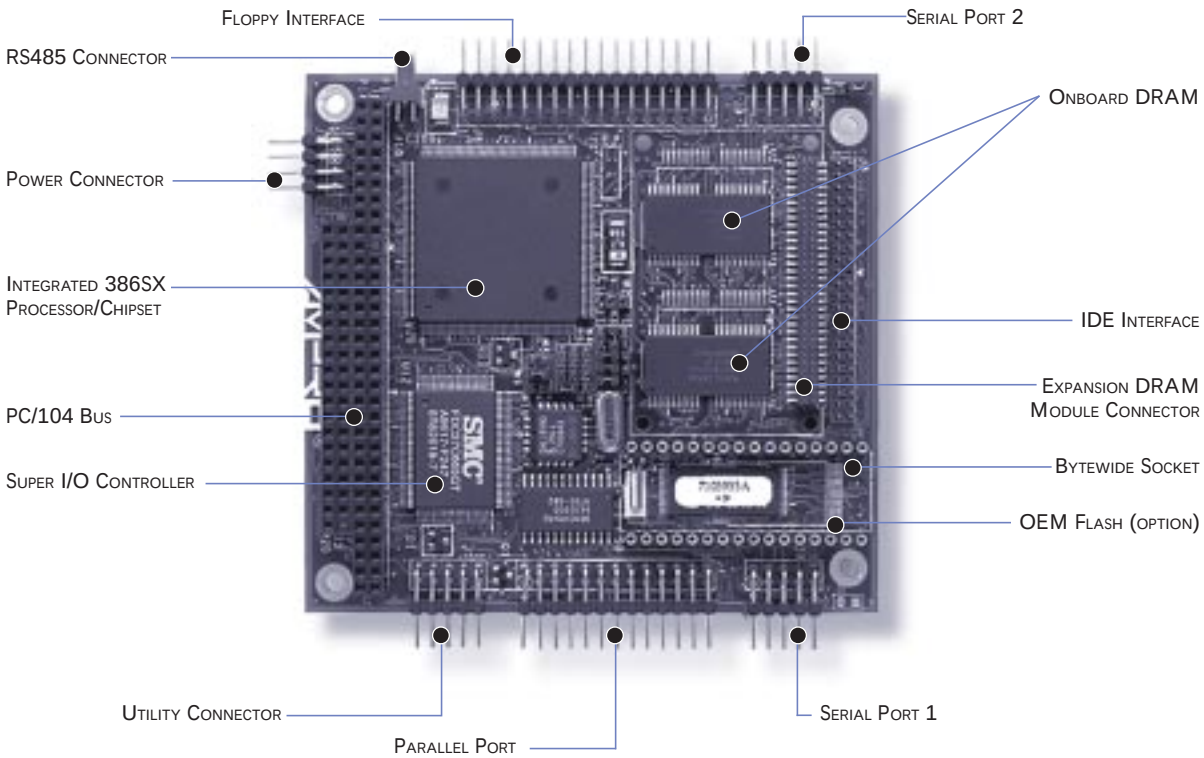
CM2-SXi

CoreModule™/3SXi • *Low Cost PC/AT-compatible PC/104™ CPU module*



The CoreModule/3SX*i* provides cost-effective 386SX processing power and PC/AT compatibility in a compact, preconfigured subsystem module. Within just 14 square inches of space, the CoreModule/3SX*i* includes the equivalent functions of a PC/AT motherboard plus several additional expansion cards. Cost-sensitive embedded applications that formerly required chip-based custom designs can now benefit from an off-the-shelf module powered by a 25 or 40 MHz 386SX-compatible CPU, along with hardware and software standards like PC/AT and MS-DOS compatibility.

The CoreModule/3SX*i* is designed to meet the demands of embedded systems through its extremely compact design, low power consumption, +5V-only operation, wide operating temperature range, and high reliability.

CONFIGURATION FLEXIBILITY

The CoreModule/3SX*i* can be used as a macrocomponent, plugged into a proprietary application board, or it can be combined with PC/104-compatible expansion products to form compact, highly integrated control subsystems. Multiple modules can be stacked together without the cost and space penalties of additional mounting hardware.

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SPECIFICATIONS

Fully PC/104 Compliant!

PC MOTHERBOARD FUNCTIONS

CPU	• 386SX-compatible, 25 or 40 MHz internal clock rate
MEMORY	• 2 or 4M bytes directly surface-mounted. Additional 4M bytes via plug-in DRAM module
DMA INTERNAL	• 7 DMA channels (8237 equivalent)
	• 14 interrupt channels (8259 equivalent)
COUNTER TIMER	• 3 programmable counter/timers (8254 equivalent)
KEYBOARD	• PC/AT-compatible keyboard port
	• Speaker port with 0.1 watt drive
REAL TIME CLOCK	• CMOS RAM (MC146818 equivalent); requires external 3.0-3.6V battery (Tadiran TL-5242/W or equivalent)
BIOS	• Award BIOS with Ampro enhancements (See Ampro Embedded-PC Enhancements section)

ADDITIONAL ONBOARD FUNCTIONS

SERIAL	• Two RS232 serial ports with full handshaking
	• One port is jumper-configurable for RS232 or RS485
	• Both ports implemented using 16C550 equivalent with 16 byte data FIFOs
PARALLEL	• EPP/ECP compatible bidirectional parallel printer port
IDE	• Support for 1 or 2 IDE hard disk drives
	• Low profile 44 pin compact 2mm connector
FLOPPY	• Supports 1 or 2 drives
BYTEWIDE SOCKET	• Usable with 32K-1M byte EPROMs, 32K-512K Flash EPROMs, 32K-512K SRAMs, or 32K-512K NOVRAMs
	• SRAM backup using off-board battery
	• Configurable as 64K-, or 128K-byte window, addressed in the range D0000-EFFFFh
	• Usable with DiskOnChip2000™ read/write Flash SSD device
OEM FLASH	• Onboard 1M byte OEM Flash (optional)
	• 960K bytes available for OEM use (balance used by system BIOS)
	• Configurable as 64K-byte window, addressed in the range D0000-DFFFFh or E0000-EFFFFh
	• SSD 5.31 Support Software converts into an in-system programmable, read-only SSD devices
	• OEM Flash TFFS software converts into a full read/write SSD drive (not usable simultaneously with DiskOnChip2000™)
	• 2K bit configuration EEPROM, with 512 bits for OEM use
WATCHDOG TIMER	• Utilizes real-time clock alarm function
	• Timeout triggers hardware reset or non-maskable interrupt

MECHANICAL

SIZE	• 3.6 x 3.8 x 0.9 in. (90 x 96 x 23mm) (Includes stackthrough pins. Please refer to PC/104 specification for stacking and other dimensions.)
BUS	• 16-bit PC/104 bus
POWER	• Requirements (typical 25 MHz with 4M bytes RAM): +5V ±5% — 500 mA active/160 mA sleep
ENVIRONMENTAL	• 0° to 70° C standard temperature
	• –40° to +85° C extended operating temperature (available by special order)
	• 5% to 95% relative humidity, non-condensing
	• Storage temperature: -55° to +85° C
	• Weight: 3.0 oz. (85 gm)

NOTE: Contact Ampro for custom configurations and special order options.

For ordering information and pricing please refer to Ampro Ordering Guide.

THE EMBEDDED SOLUTIONS PROVIDER™